

# PATENT ABSTRACTS OF JAPAN

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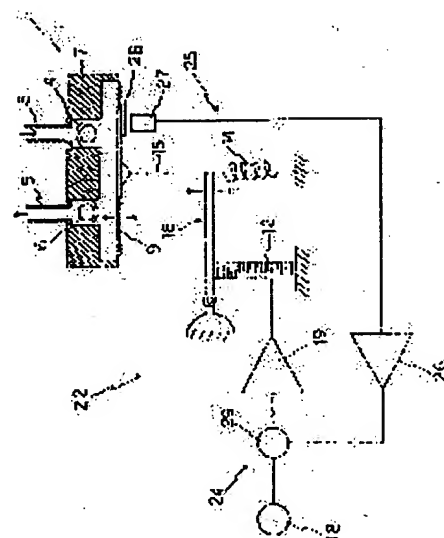
## (54) CONTROL DEVICE OF PIEZOELECTRIC PUMP

### (57)Abstract:

**PURPOSE:** To make flow control correctly at real time by correcting the driving of a moving part by means of a correction signal made by reversing the difference between a displacement signal equivalent to the mechanical vibration of the moving part and a predetermined signal, in a device where fluid is fed under pressure by means of the mechanical vibration of the moving part.

**CONSTITUTION:** A piezoelectric pump is composed of a pump 1, in which a diaphragm 9 is provided on a housing 7 with an inlet 3 and outlet 5 therein, and a drive section 22 for vibrating the diaphragm 9 mechanically.

The drive section 22 is provided with a magnifying mechanism 16 for transmitting the movement of a lever 13, magnifying the displacement of a piezoelectric actuator 12 energized through a drive circuit 24, to the diaphragm 9 through a leaf spring 15, and the drive circuit 24 is controlled by a control circuit 25. In this case, the mechanical vibration of the diaphragm 9 is detected by a displacement sensor 27, and a correction signal made by reversing the difference between a displacement signal from the displacement sensor 27, and a predetermined signal is added to an alternating signal from a transmitter 29 to correct the driving of the diaphragm 9.



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